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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/870,496	06/01/2001	Tetsuya Nakashima	209128US0	8803

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OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER	
BOLDEN, ELIZABETH A	
ART UNIT	**PAPER NUMBER**
1755	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/870,496	NAKASHIMA ET AL.	
	Examin r	Art Unit	
	Elizabeth A. Bolden	1755	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 December 2002* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3,5-9,11 and 13-24* is/are pending in the application.

4a) Of the above claim(s) *17-23* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3,5-9,11,13-16 and 24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Any rejections and or objections, made in the previous Office Action, and not repeated below, are hereby withdrawn.

Election/Restrictions

Newly submitted claims 17-23 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: Claims 17-23 are directed to a magnetic disc, wherein claims 1, 3, 5-9, 11, 13-16, and 24 are directed to a glass composition.

Inventions for a glass composition and a magnetic disc are related as mutually exclusive species in an intermediate-final product relationship. Distinctness is proven for claims in this relationship if the intermediate product is useful to make other than the final product (MPEP § 806.04(b), 3rd paragraph), and the species are patentably distinct (MPEP § 806.04(h)). In the instant case, the intermediate product is deemed to be useful as flat panel display screen and the inventions are deemed patentably distinct since there is nothing on this record to show them to be obvious variants. Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions anticipated by the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution

on the merits. Accordingly, claims 17-23 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 1 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The negative limitation of Bi_2O_3 recited in claim 1 is not supported by the specification, as originally filed. The specification fails to recognize the concept of a glass in which "Bi_2O_3 is not present."

Applicants assert that the present examples are support for the exclusion of Bi_2O_3 because Bi_2O_3 is not present in the examples. However, the mere absence of Bi_2O_3 in the examples is insufficient support for the expressed exclusion of Bi_2O_3 from the inventive glass.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 3, 5-9, 11, 13-15, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kohli et al., U.S. Patent 5,854,152.

Kohli et al. teach a glass composition comprising, in weight percent, 38-56 SiO_2, 10-28 Al_2O_3, 0-4 Li_2O, 0-6 Na_2O, 0-15 K_2O, 4-18 CaO, 0-5 MgO, more than 8 to 24 SrO, and 0-2 ZrO_2. See abstract of Kohli et al. Kohli et al. teach that 0-5 % TiO_2 can be added to the composition. See column 2, lines 28-34. Kohli et al. teach a range of thermal expansion coefficients from 60 to $90x^{-7}/°C$. See column 2, lines 12-14. These individual compositional and thermal expansion ranges overlap the individual compositional and thermal expansion ranges of claims 1, 3, 5-7, and 24. Overlapping ranges have been held to establish *prima facia* obviousness. See MPEP 2144.05.

Kohli et al. differs from the instant invention by not specifically teach a combined range of ZrO_2+TiO_2 and Al_2O_3+TiO_2. However, the ranges of TiO_2, ZrO_2, and Al_2O_3 taught by Kohli et al. overlap the amounts of "ZrO_2+TiO_2" and "Al_2O_3+ TiO_2."

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have selected from the overlapping portion of the ranges disclosed by the Kohli et al. because overlapping ranges have been held to establish *prima facie* obviousness. See MPEP 2144.05.

One of ordinary skill in the art would expect that a glass with overlapping compositional ranges would have the properties recited in claims 8, 9, 11, and 13-15.

Claims 1, 3, 5-9, 11, 13-15, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maeda et al., U.S. Patent 5,599,754.

Maeda et al. teach a glass composition comprising, in weight percent, 52-62 SiO_2, 5-12 Al_2O_3, 0-4 MgO, 3-5.5 CaO, 6-9 SrO, 0-13 BaO, 7-14 $Li_2O+Na_2O+K_2O$, 0.2-6 ZrO_2, and 0-0.6 SO_3. See abstract of Maeda et al. The reference teaches that 0-5 % TiO_2 can be added to the glass. See column 3, lines 40-42. Maeda et al. teach that the glasses have a T_g of at least 600°C and a coefficient of thermal expansion in the range of $75x10^{-7}$ to $95x10^{-7}$/°C. See column 3, lines 51-59. These individual compositional and thermal expansion ranges overlap the individual compositional and thermal property ranges of claims 1, 3, 5-8, and 24. Overlapping ranges have been held to establish *prima facia* obviousness. See MPEP 2144.05.

Maeda et al. differs from the instant invention by not specifically teach a combined range of ZrO_2+TiO_2 and $Al_2O_3+TiO_2$. However, the ranges of TiO_2, ZrO_2, and Al_2O_3 taught by Maeda et al. overlap the amounts of "ZrO_2+TiO_2" and "$Al_2O_3+ TiO_2$."

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have selected from the overlapping portion of the ranges disclosed by the Maeda et al. because overlapping ranges have been held to establish *prima facie* obviousness. See MPEP 2144.05.

One of ordinary skill in the art would expect that a glass with overlapping compositional ranges would have the properties recited in claims 9, 11, and 13-15.

Claims 1, 3, 5-9, 11, 13-16, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Speit et al., U.S. Patent 6,162,751.

Speit et al. teach a glass composition comprising, in weight percent, 40-60 SiO_2, 5-20 Al_2O_3, 0-5 B_2O_3, 0-20 MgO, 0-6 CaO, 0-10 SrO+BaO, 0-10 Li_2O, 0-12 Na_2O, 0-5 K_2O, 0-5 ZrO_2, 0-5 TiO_2, 0-1 CeO_2 and others. See abstract of Speit et al. Speit et al. teach that the glasses have a coefficient of thermal expansion in the range of 6 $x10^{-6}$ to $9x10^{-6}$/°C. See column 5, lines 6-8. These individual compositional and thermal expansion ranges overlap the individual compositional and thermal property ranges of claims 1, 3, 5-7, 16 and 24. Overlapping ranges have been held to establish *prima facia* obviousness. See MPEP 2144.05.

Speit et al. differs from the instant invention by not specifically teach a combined range of ZrO_2+TiO_2 and Al_2O_3+TiO_2. However, the ranges of TiO_2, ZrO_2, and Al_2O_3 taught by Speit et al. overlap the amounts of "ZrO_2+TiO_2" and "Al_2O_3+ TiO_2."

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have selected from the overlapping portion of the ranges disclosed by the Speit et al. because overlapping ranges have been held to establish *prima facie* obviousness. See MPEP 2144.05.

One of ordinary skill in the art would expect that a glass with overlapping compositional ranges would have the properties recited in claims 8, 9, 11, and 13-15.

Response to Arguments

Applicant's arguments with respect to claims 1, 3, 5-9, 11, and 13-15 have been considered but are moot in view of the new ground(s) of rejection.

The Examiner will address the arguments as they pertain to the above rejections.

The Applicants argues that Kohli et al., U.S. 5,854,152, does not disclose TiO_2 as a glass component and that the reference does not disclose nor suggest the combined limitation of TiO_2+ZrO_2 of at least 2.3 %. These arguments are not deemed persuasive. Kohli et al. does teach the use of TiO_2 in the glass. See column 2, lines 30-31. The TiO_2 and ZrO_2 ranges of Kohli et al. overlap the claimed TiO_2, ZrO_2, and combined TiO_2+ZrO_2 ranges of the instant invention. Overlapping ranges have been held to establish *prima facia* obviousness. See MPEP 2144.05.

The Applicants argues that Maeda et al, U.S. 5,59,754, does not disclose or suggest the BaO range and the combined Al_2O_3+TiO_2 compositional limitation as claimed in the instant invention. This argument is not deemed persuasive since Maeda et al. teach overlapping compositions with the instant invention. Overlapping ranges have been held to establish *prima facia* obviousness. See MPEP 2144.05.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth A. Bolden whose telephone number is 703-305-0124. The examiner can normally be reached on 8:30am to 6:00 pm with alternating Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark L. Bell can be reached on 703-308-3823. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

EAB
February 20, 2003

Mark L. Bell
Supervisory Patent Examiner
Technology Center 1700